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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,937	10/30/2003	T-Chun Chen	252011-1750	1037

24504 7590 08/14/2007
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EXAMINER

BUTLER, MICHAEL E

ART UNIT	PAPER NUMBER
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3653

MAIL DATE	DELIVERY MODE
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08/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/696,937

Applicant(s)

CHEN ET AL.

Examiner

Michael Butler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-8 and 25-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-2 and 4-8 and 25-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action, and apply to this and any subsequent Office Actions.

Restart of Response Period

2. Applicant has pointed out a line of text was omitted from the office action mailed 6/12/2007 and accordingly requested a new office action and reset of response period. Accordingly, a corrected final rejection office action and new response period are sent herein.

Claim Objections

3. Claims 25 – 30 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The cited system claims have only method limitations.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
5. Claims 1-2 and 4-8 and 25-30 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. No subsystem for detecting lot.

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Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States
- (c) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 1-2 and 5-7 and 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by

Erjavic et al. 5355320 which discloses all the claimed elements including:

(Re: cl 1) A system of automated sorter operation for held or banked wafer lots, comprising:
a storage device capable of storing information regarding a current status of a wafer lot, the current status indicating the wafer lot is on hold, in production bank, or in non-production bank; (c2 L 35-65; c4 L 1-24; c5 L 36-c6 L 9);
and a sorting module detecting the current status of the wafer lot from the storage device (c4 L 50-68 with c6 L 59-63 with c1 L 36-52) issuing at least one first status setting instructions according to the current status of the wafer lot to a manufacturing execution system (MES) to release the wafer lot, issuing a flow instruction with sorting recipes directing the MES to perform a sorter operation after issuing the at least one first status setting instruction, and issuing at least one second status setting instruction corresponding to instructions according to the current status of the wafer lot to the MES to hold or bank the wafer lot a gain after completing the sorting operation, wherein the at least one second status setting instruction describes a reverse procedure of a status change procedure described by the at least one first status setting instruction, and the wafer lot cannot be processed when the wafer lot is on hold in production bank, or in non-production bank (C6 L 10-58; c5 L 45-66);
wherein the wafer lot identity is input by an operator or a computer system (c6 L 10-58)
(Re: cl 2) wherein the sorting module stores the current status into a temporary file or table, issues the second status setting instruction corresponding to the current status in the temporary file or table, and removes the temporary file or table after the sorter operation (c7 L 28-32)

(Re: cl 5) further comprising a wafer sorter performing sorter operations according to sorting recipes (50 fig 2a)

(Re: cl 6)(5) further comprising a transport system transporting the wafer lot to the wafer

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sorter (c2 L 35-c3 L 16)

(Re: cl 7)(6) wherein the MES applies a tool dispatch rule to determine the wafer sorter starts the transport system and the wafer sorter to perform the sorter operation using automated instructions (c4 L 50-68)

(Re: cl 25) storage device stores information indicating the wafer lot on hold, sorting module capable of issuing first and second status instruction for lot (c5 L 36-c6 L 9);

(Re: cl 26) wafer lot is on hold when wafer lot held for inspection between start operation and end operation during fabrication (c3 L 1-16)

(Re: cl 27) storage device for indication the wafer bank move/bank in and hold lot (c2 L 5-34)

(Re: cl 28) (27) wafer lot is in production when wafer lot is banked due to quality issue after an end operation completing fabrication (c3 L 1-16)

(Re: cl 29) storage device stores information indicating the wafer lot is on non-production bank out (c3 L 1-16)

(Re: cl 30) (29) wafer lots in production bank when the wafer lot is banked due to quality issue between a start operation and an end operation during fabrication (c3 L 1-16).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim(s) 1-2 and 4-8 and 25-30 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Erjavic et al. 5355320 in view of Conboy et al. 6392403 wherein the former discloses the elements previously discussed and the latter discloses any elements not inherently taught by the former including:

(Re: cl 4) wherein the MES releases or holds/banks the wafer lot based on the first status setting instruction or the second status setting instruction respectively (c3 L 45-c4 L 55)

(Re: cl 8) wherein the sorter operation is slot mapping, carrier exchange, wafer lot combination or splits (c4 L 55-67).

It would have been obvious for Erjavic et al. to release the wafer after status setting to a defective wafer lot if a defective status occurs as taught by Conboy et al. and come up with the instant invention. It would have been obvious for Erjavic et al. to slot map the wafer to select the desired specializing wafer as taught by Conboy et al. and come up with the instant invention.

10. Claim(s) 1-2 and 4-8 and 25-30 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Erjavic et al. 5355320 in view of Beffa 7117063 wherein the former discloses the elements previously discussed and the latter discloses any elements not inherently taught by the former including:

(Re: cl 4) wherein the MES releases or holds/banks the wafer lot based on the first status setting instruction or the second status setting instruction respectively (5 L 39-46)

(Re: cl 8) wherein the sorter operation is slot mapping, carrier exchange, wafer lot combination or splits (c6 L 55-67).

It would have been obvious for Erjavic et al. to release the wafer after status setting to a defective wafer lot if a defective status occurs as taught by Beffa and come up with the instant invention. It would have been obvious for Erjavic et al. to split lot the wafer so that different wafers may be processed in different operations as taught by Beffa and come up with the instant invention.

Response to Arguments

11. Applicant's attestation was effective under in removing Chang et al. as 103/102(e) prior art per 35 USC 103(c).

Applicant's amendment and argument were ineffective in removing Erjavic et al. as an anticipatory reference and Obviousness rejections evidenced by Erjavic et al. in view of Conboy et al. and Erjavic et al. in view of Beffa. Note that Ergavic et al. uses a bar code reader and is

well capable of using such a detecting device in determining the status of the wafer lot, particularly with the detecting as a reading.

Erjavic et al. has a storage device maintaining the current status information on the wafer and test and usage information and availability. The destination within the carousel is established from the test and the resulting status per a preprogrammed rule. Further notable are note Conboy et al. and Beffa both configured for recoding test status and sorting wafers from the production run premised upon those results.

A hypothetical condition precedent that might not occur may not be the basis for distinguishing over the prior art. Apparatus claims must be differentiated structurally from the prior art- MPEP 2114 proscribes that the manner of operating the device does not differentiate apparatus claims from the prior art.

Conclusion

12. Applicant's amendment necessitated any new grounds for rejection. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Exmr. Michael E. Butler whose telephone number is (571) 272-6937.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey, can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M.E.B.
8/7/09


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